

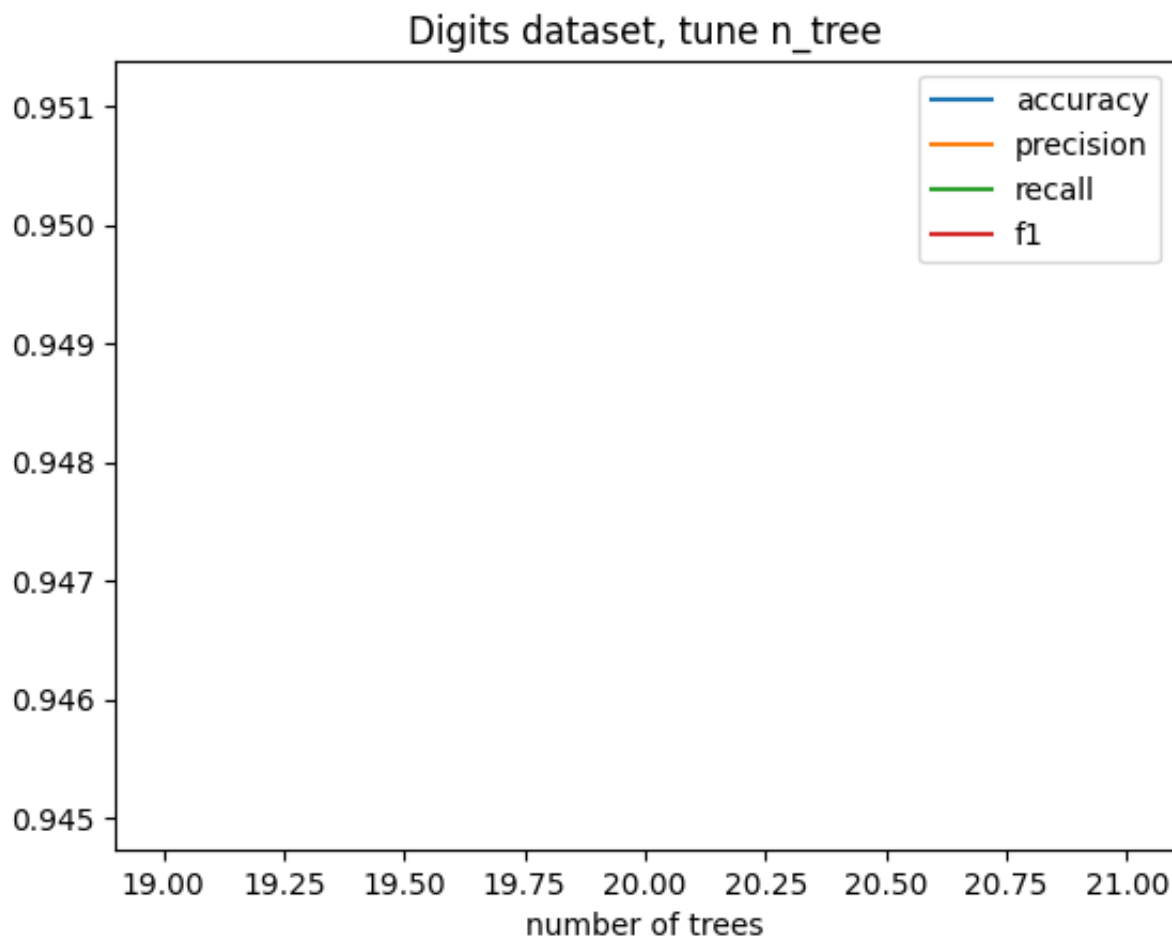
# CS589 Final Project Report

Written by Chang Liu and Haochen(Harry) Wang

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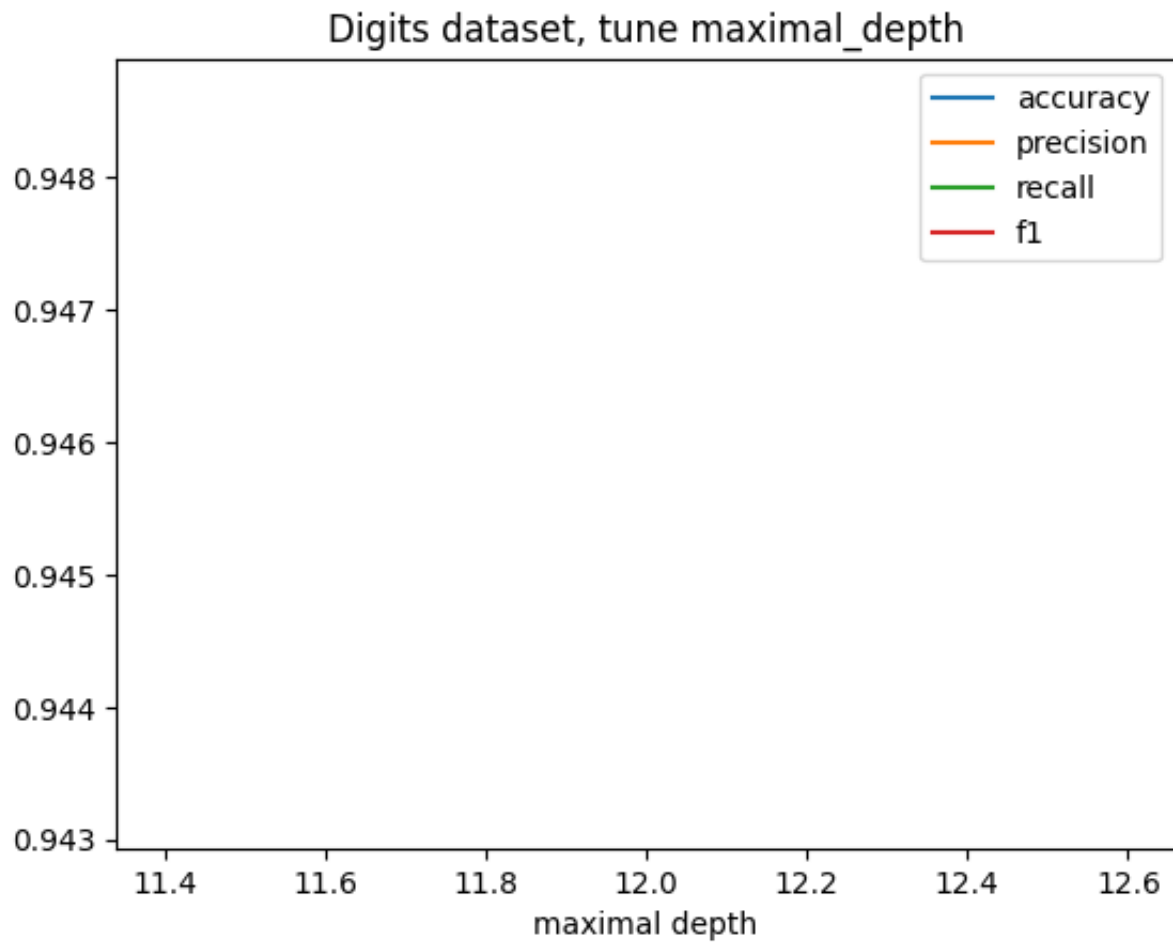
## The Hand-Written Digits Recognition Dataset

### Random Forest

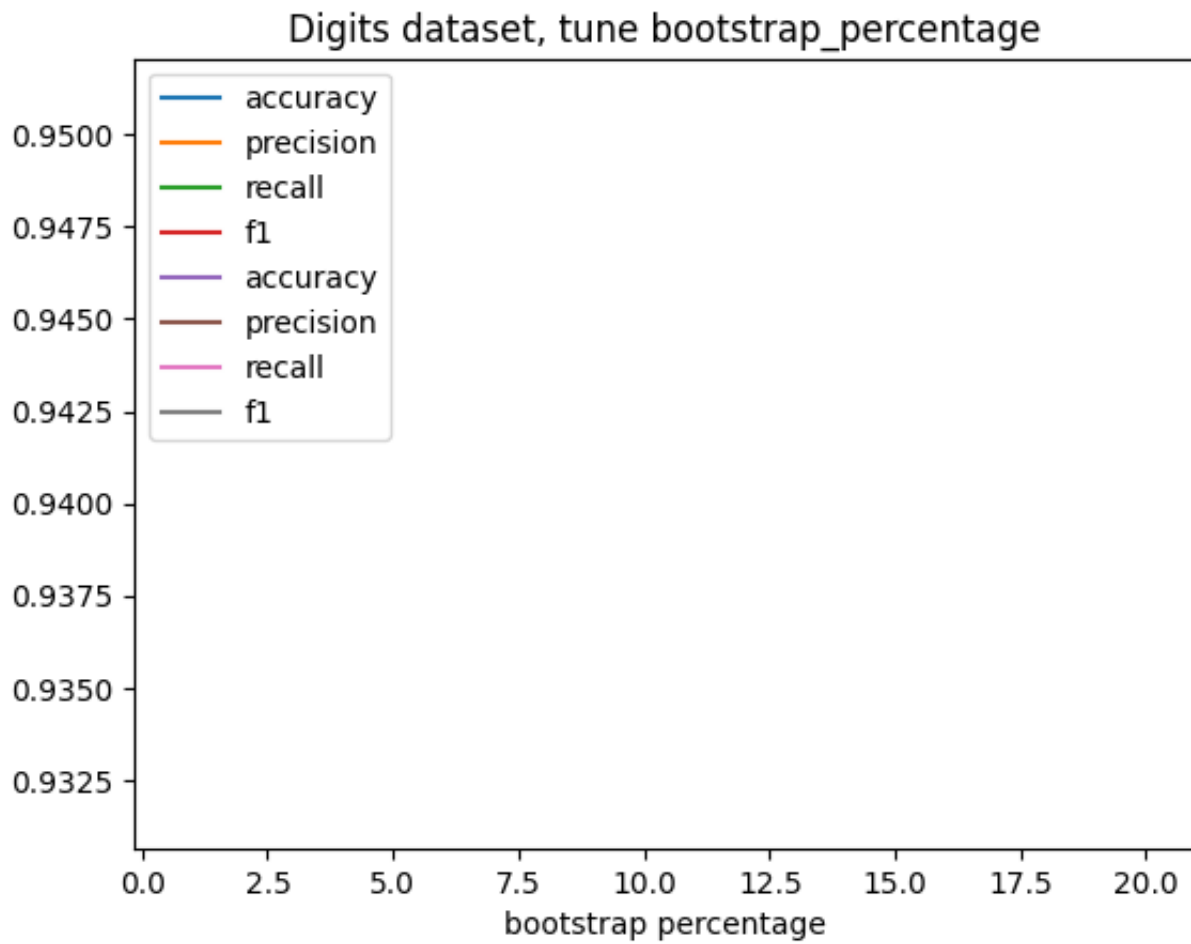


Picked n = 20

accuracy: 0.948 precision: 0.954 recall: 0.948 f1: 0.947



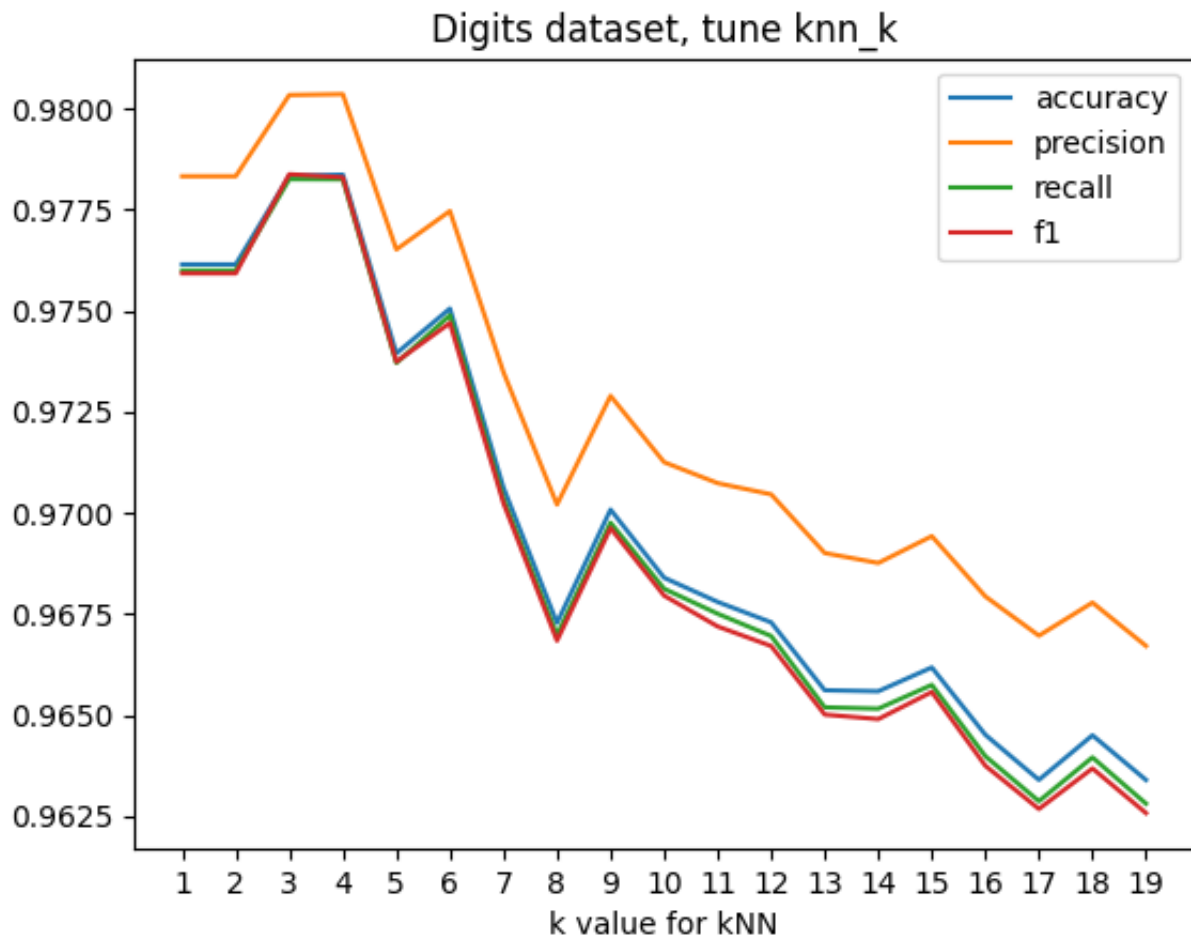
Picked max\_depth = 12 accuracy: 0.944 precision: 0.949 recall: 0.944 f1: 0.943



Picked bootstrap\_percentage = 0.8

accuracy: 0.933 precision: 0.941 recall: 0.933 f1: 0.932

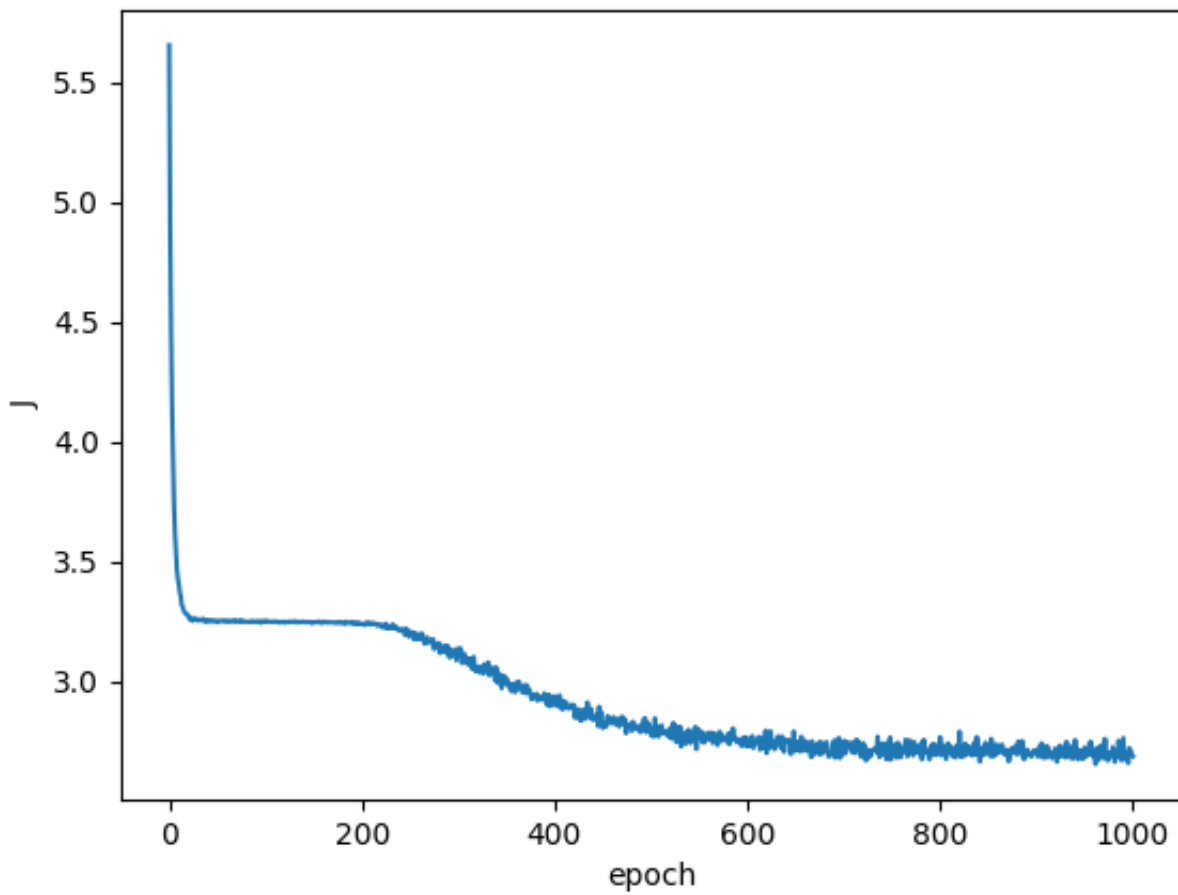
## kNN



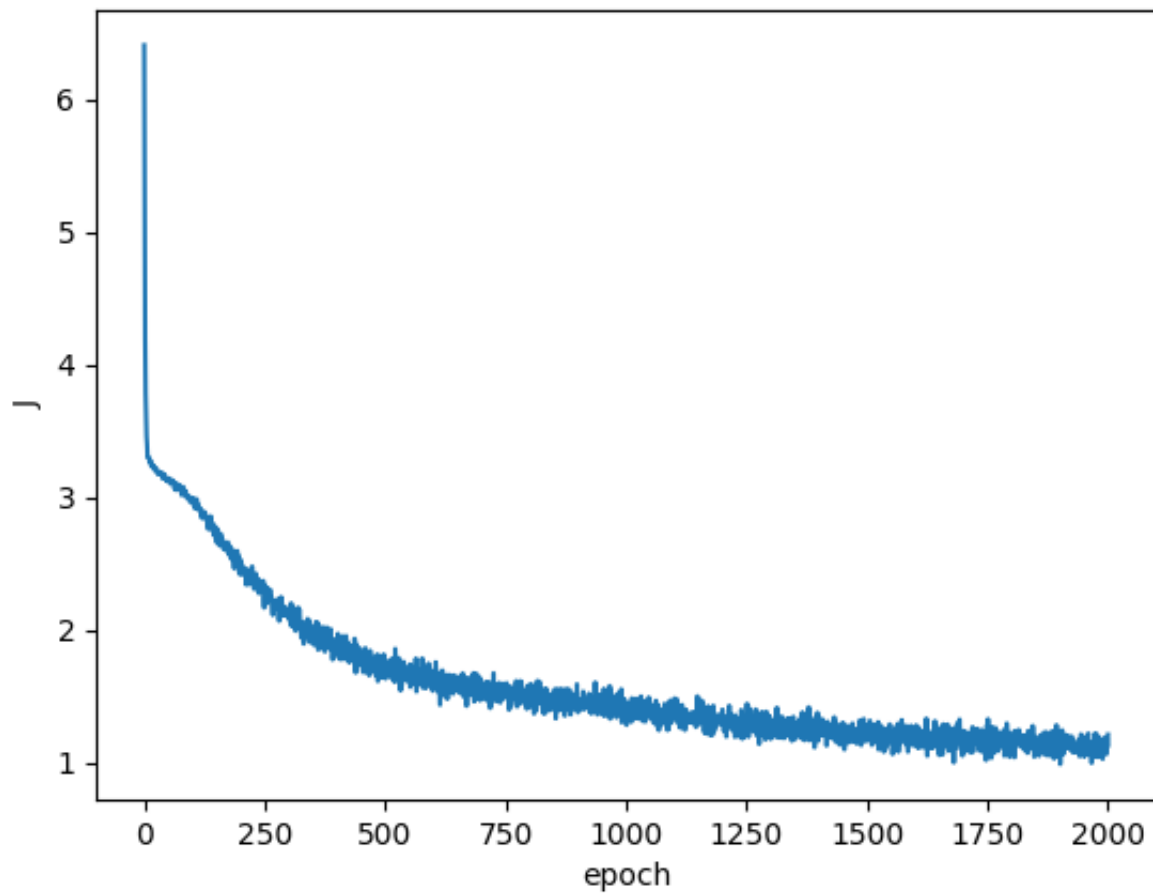
Picked knn\_k = 3 accuracy: 0.978 precision: 0.980 recall: 0.978 f1: 0.978

**NN**

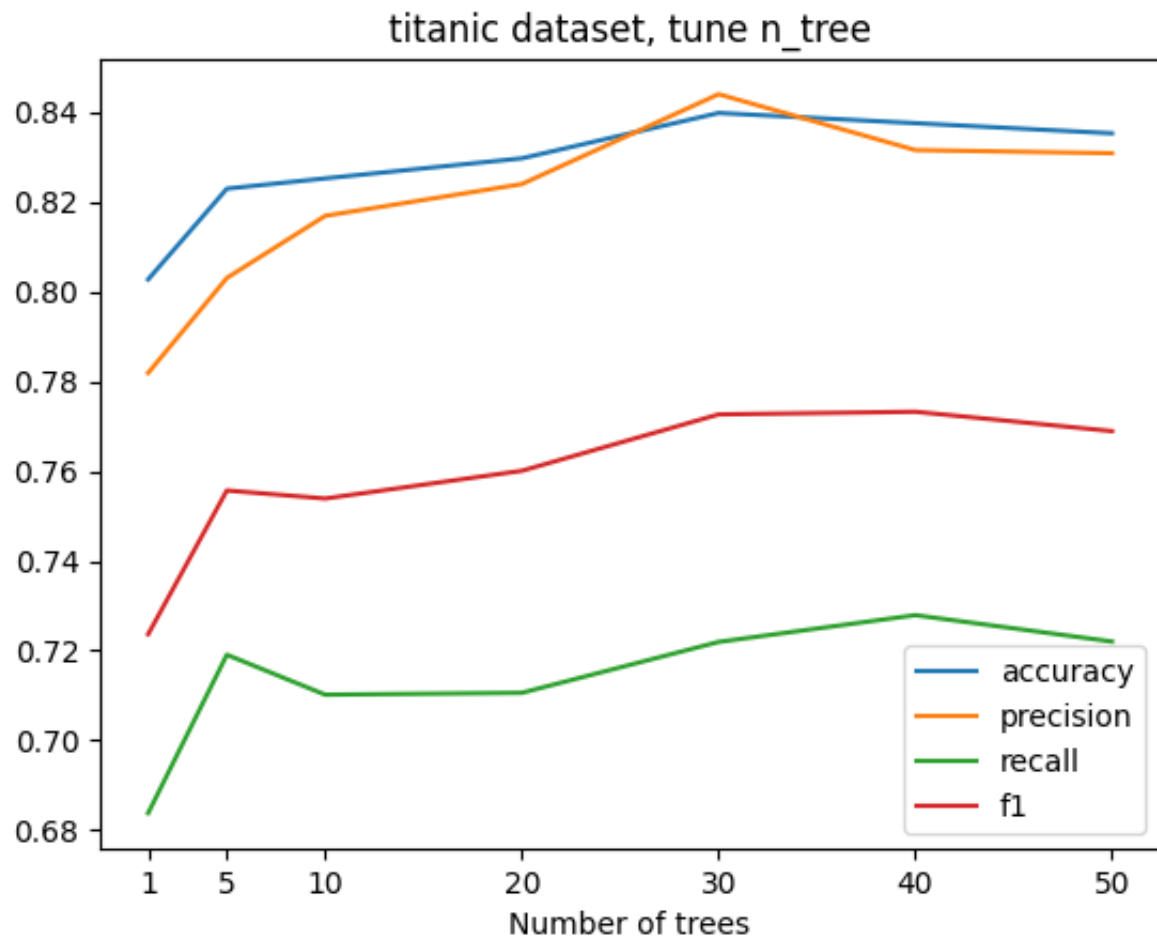
## Digits Data Neural Network with [2] hidden layers and 1000 epochs



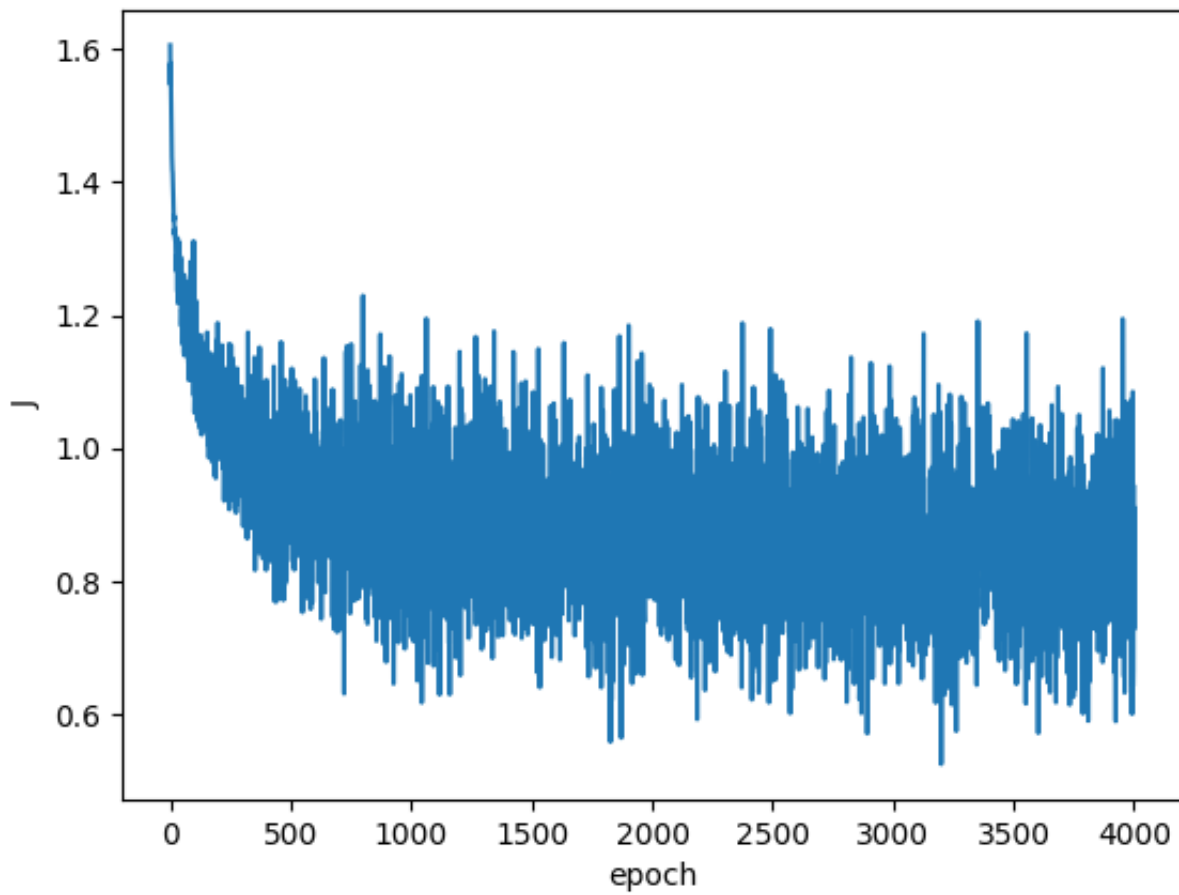
Digits Data Neural Network with [4] hidden layers and 2000 epochs



## The Titanic Dataset

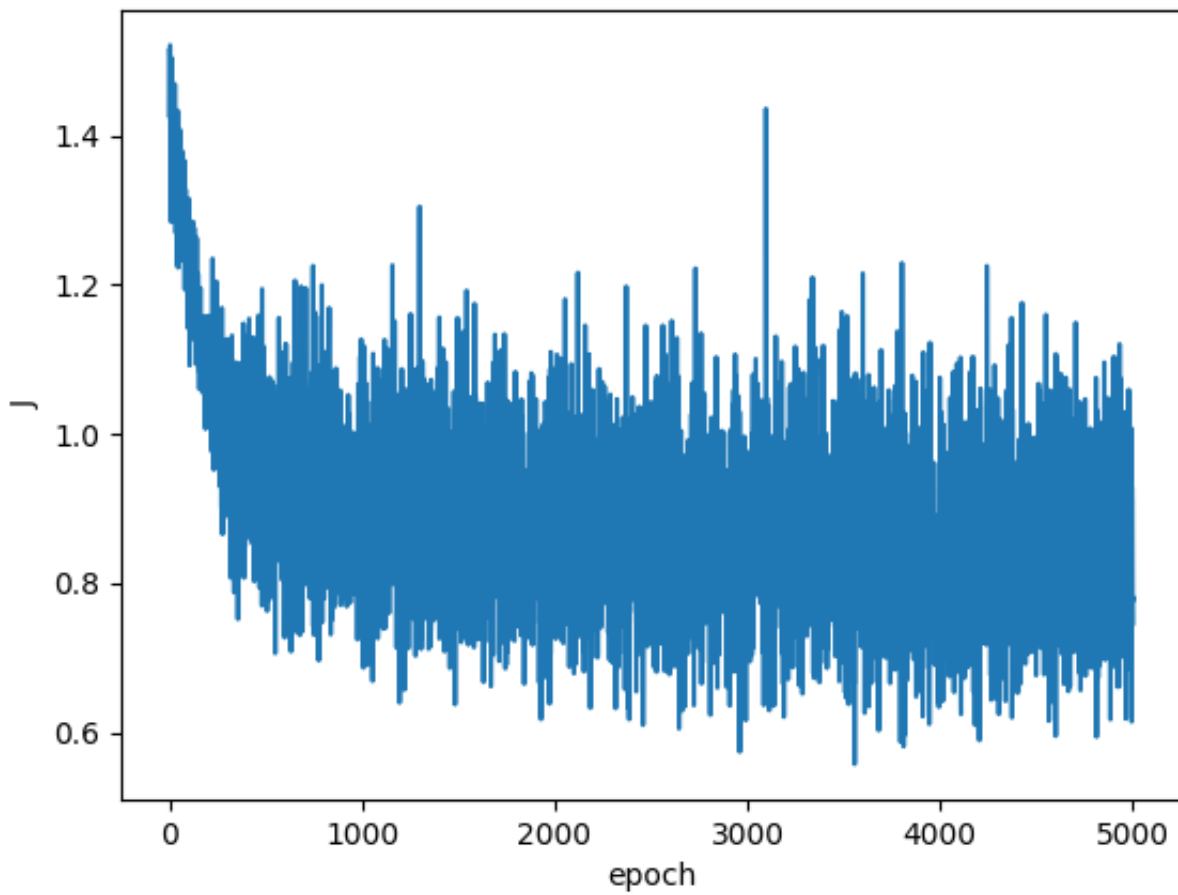


### Titanic Data Neural Network with [4] hidden layers and 4000 epochs

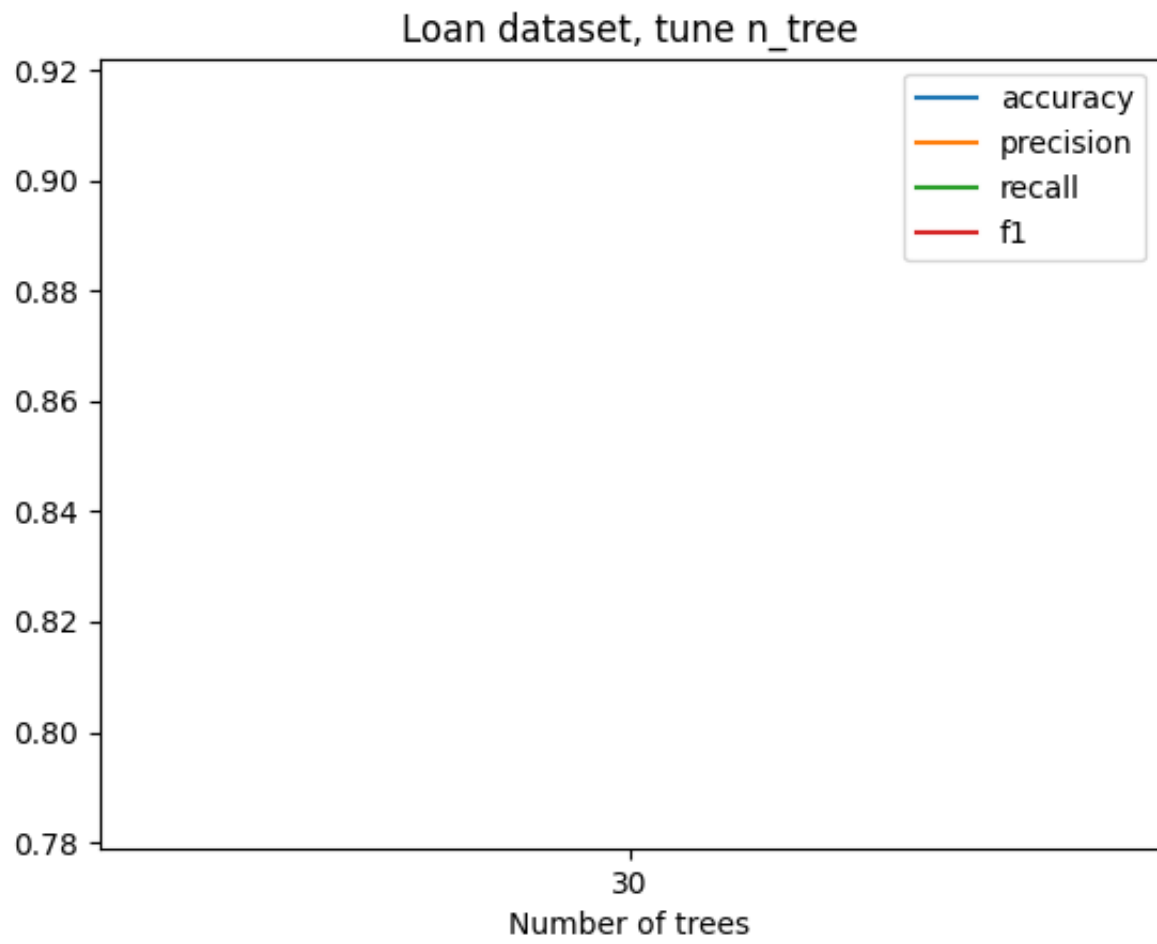


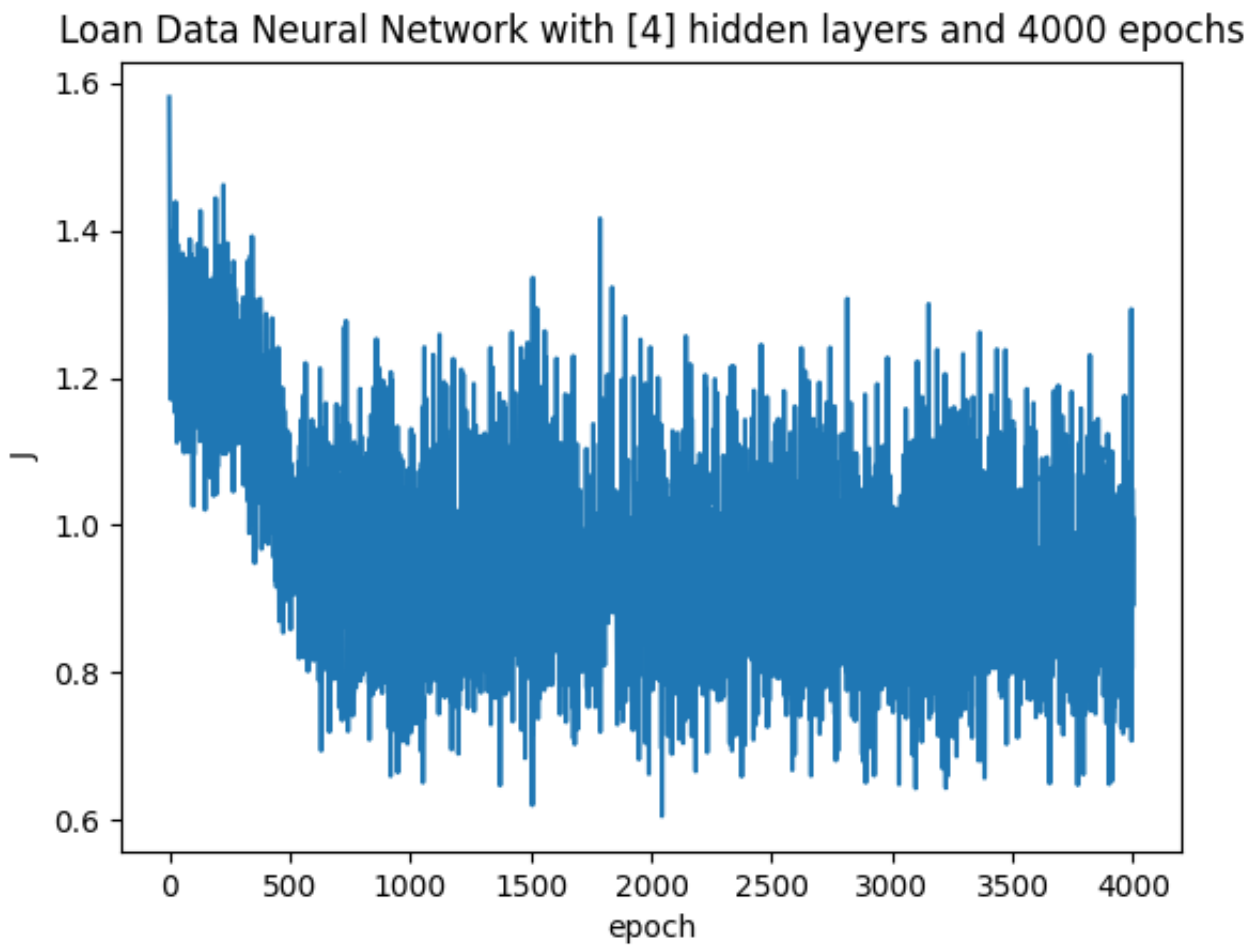


Titanic Data Neural Network with [8] hidden layers and 5000 epochs

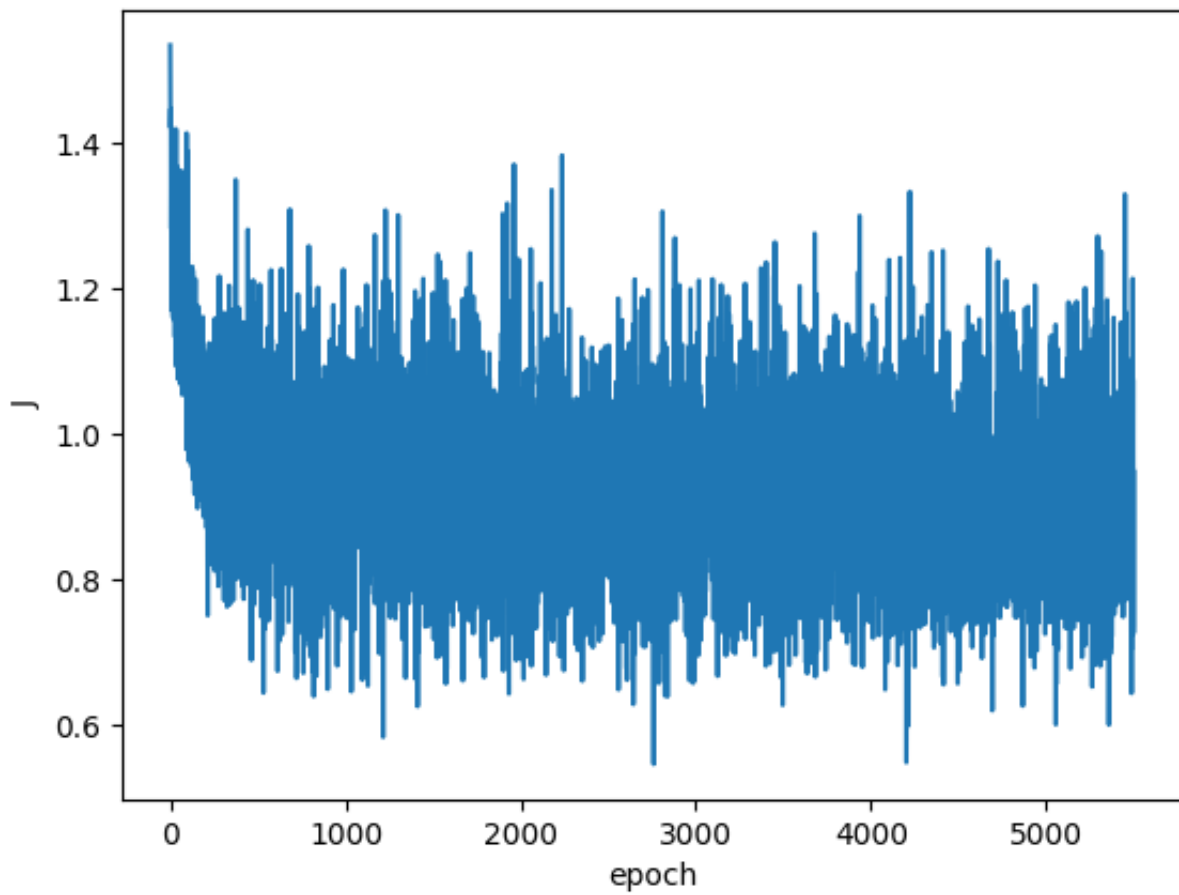


## The Loan Eligibility Prediction Dataset

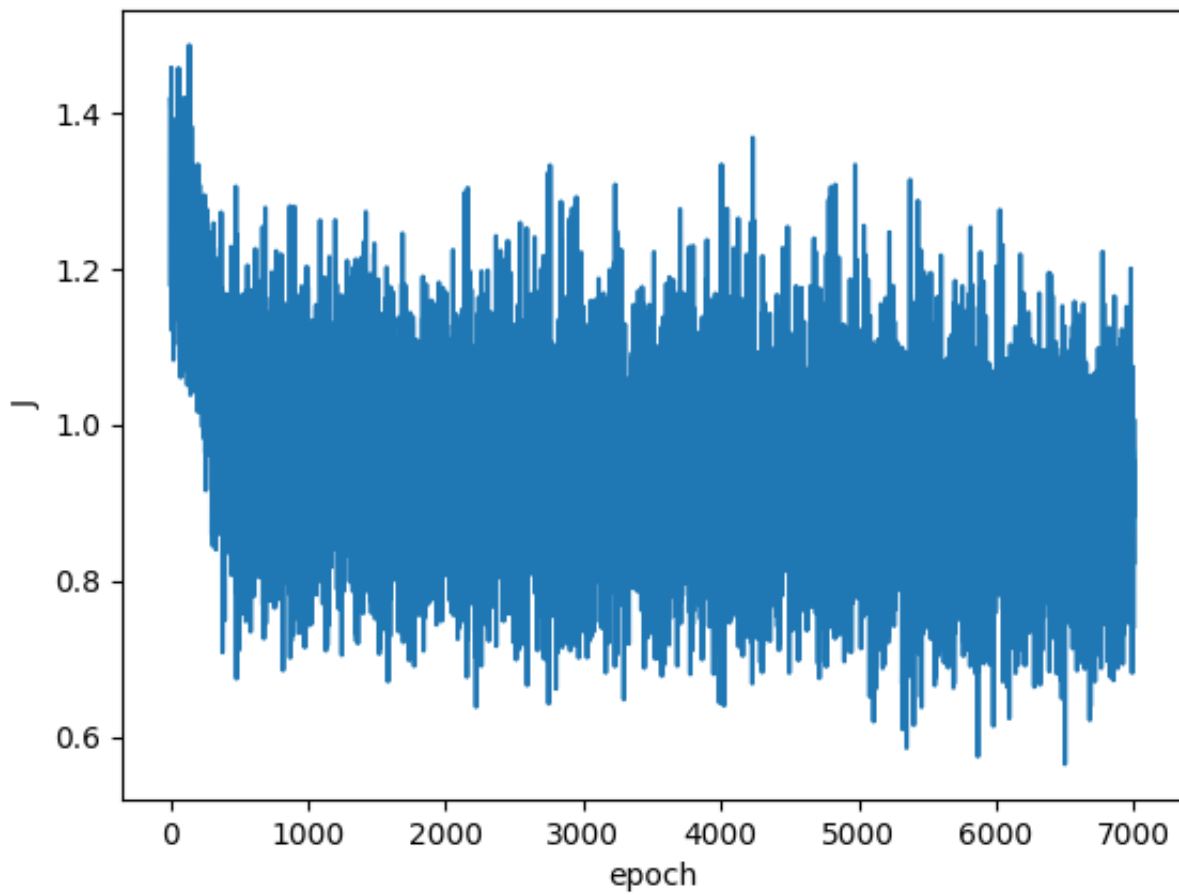




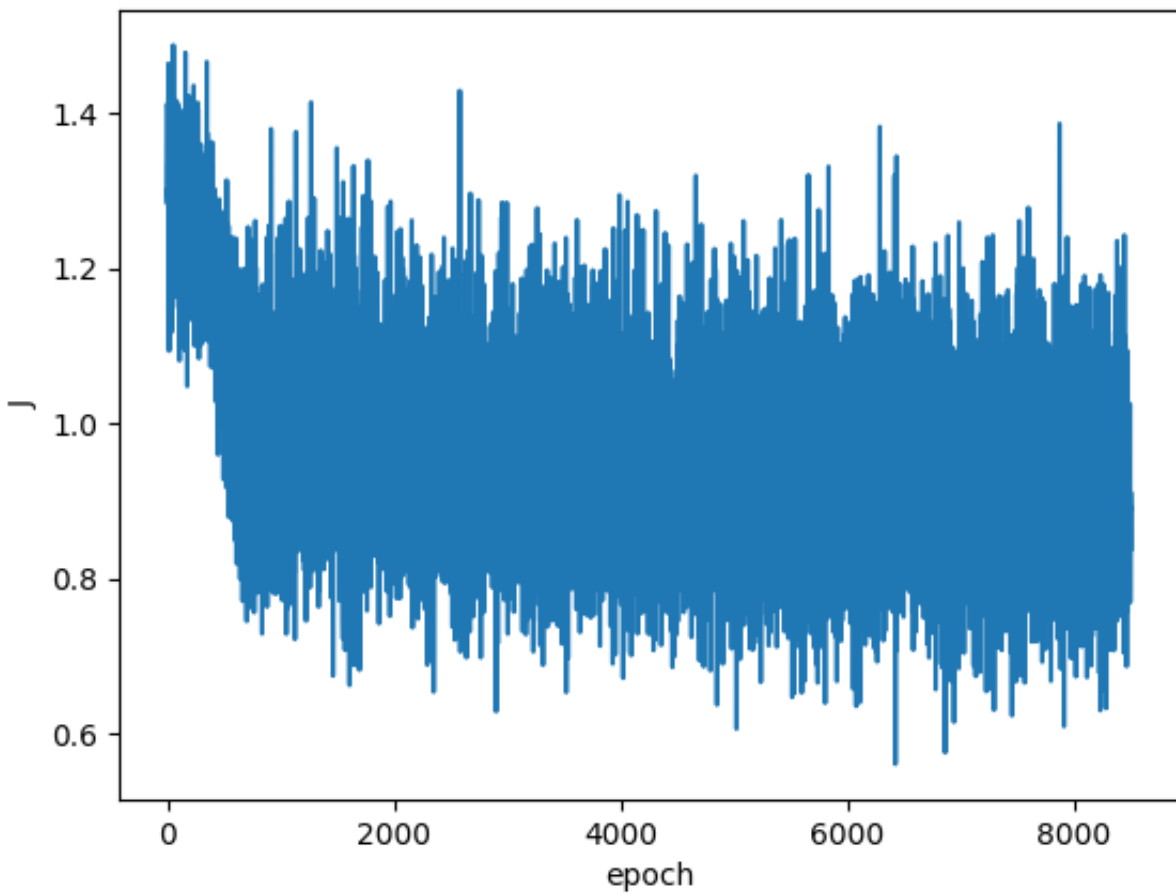
Loan Data Neural Network with [8] hidden layers and 5500 epochs



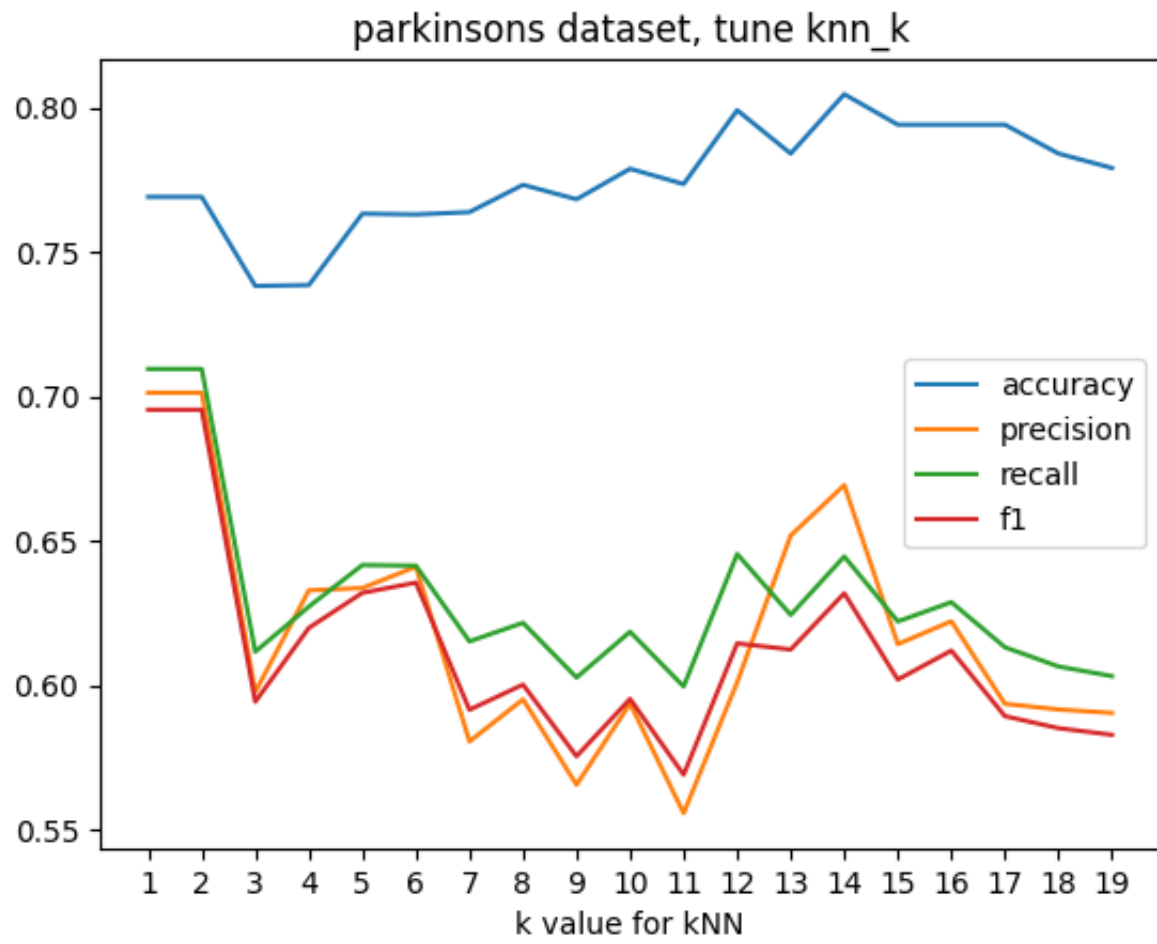
Loan Data Neural Network with [8, 8] hidden layers and 7000 epochs

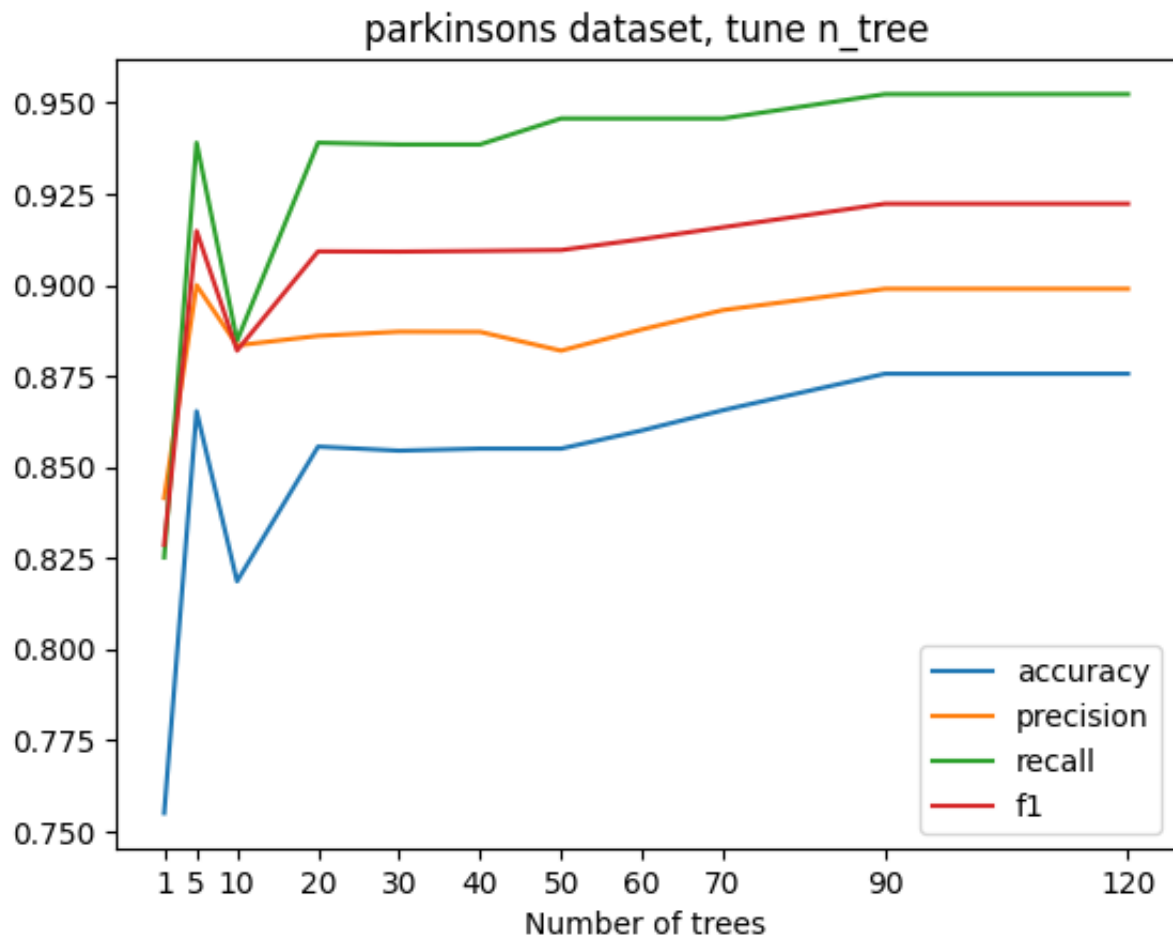


Loan Data Neural Network with [8, 8, 8] hidden layers and 8500 epochs



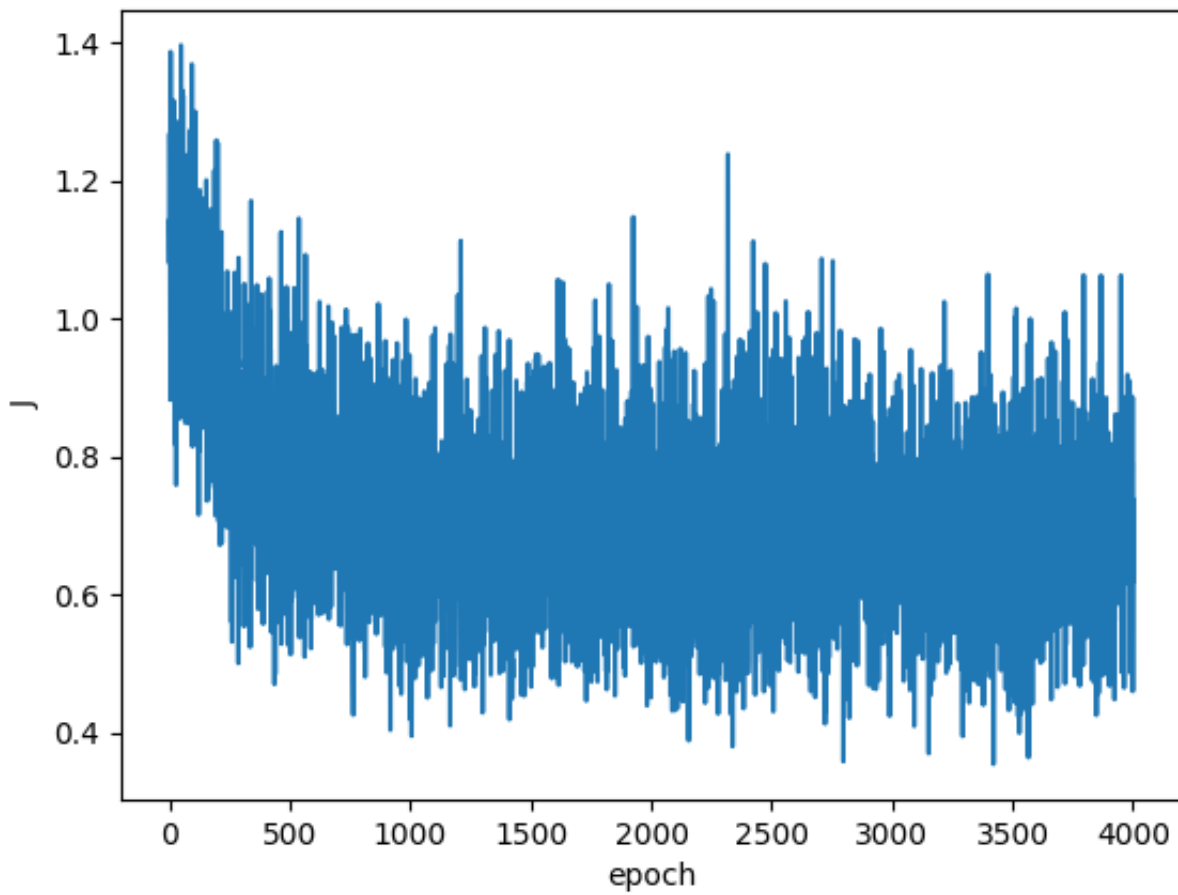
## The Oxford Parkinson's Disease Detection Dataset



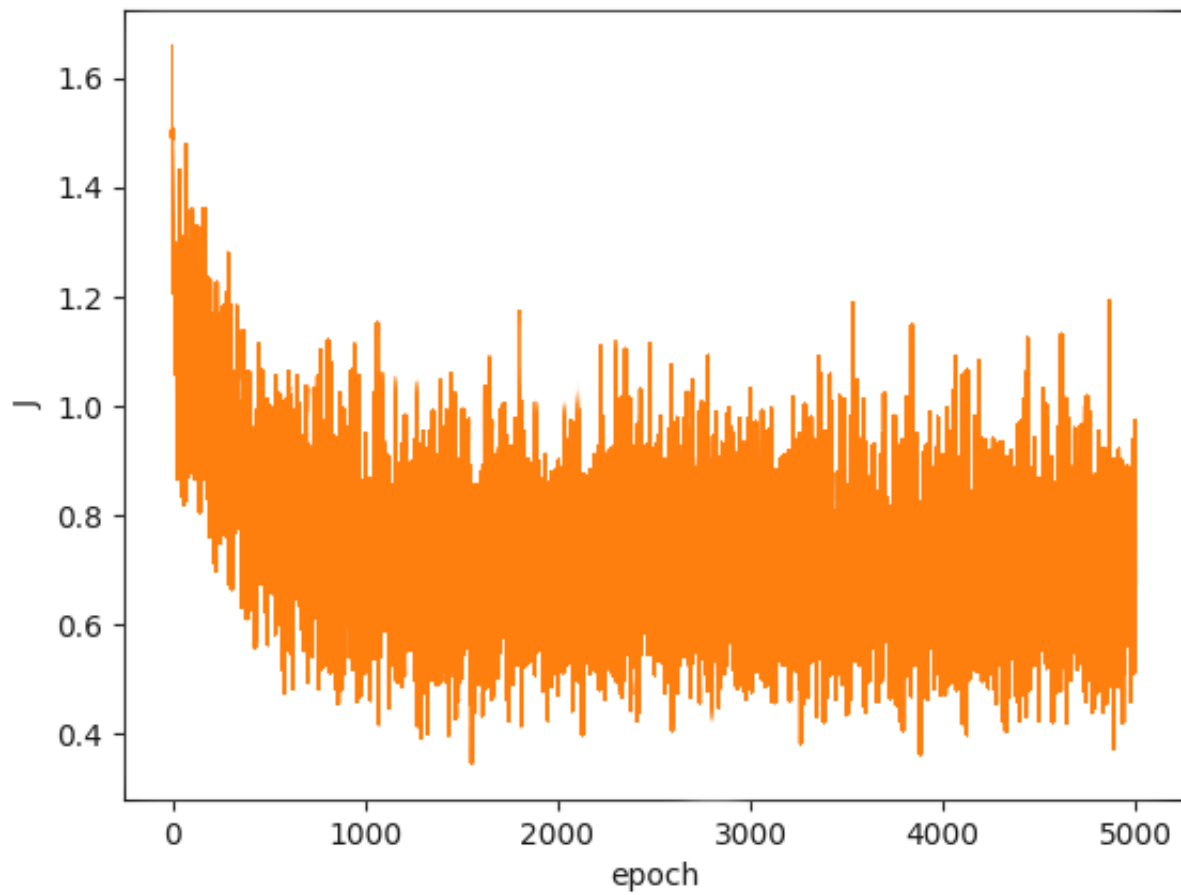




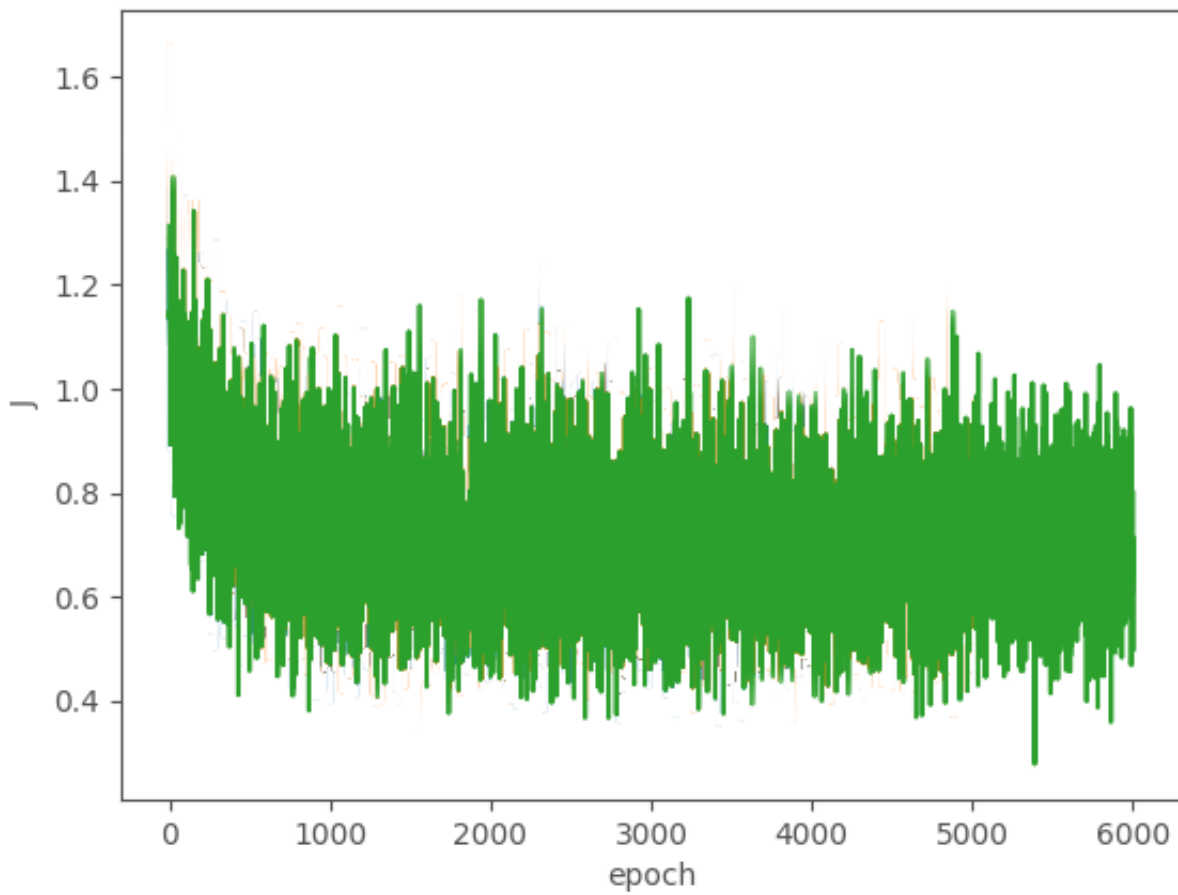
### Parkinson Data Neural Network with [4] hidden layers and 4000 epochs



## Parkinson Data Neural Network with [4, 4] hidden layers and 5000 epochs



## Parkinson Data Neural Network with [8] hidden layers and 6000 epochs



[illegible]